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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,259	02/25/2002	Igor Alexeff	20040	2015

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EXAMINER

LEE, BENNY T

ART UNIT PAPER NUMBER

2817

DATE MAILED: 06/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



## Patent and Trademark Office

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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

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EXAMINER	
ART UNIT	PAPER NUMBER
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DATE MAILED:

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), \_\_\_\_\_ day(s) from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

## Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449       | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474      | 6. <input type="checkbox"/> _____   |

## Part II SUMMARY OF ACTION

1. ☒ Claims 1-40 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-3, 7-13, 14-21, 23-26, 28-32, 33-40 are rejected.
5. ☒ Claims 4-6, 22, 27 are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are: ☐ acceptable;  
☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

SN 84259

Art Unit: 2817

The disclosure is objected to because of the following informalities: Page 8, paragraph 0015; page 13, paragraph 0026; page 14, paragraph 0028; paragraph 0042: at all appropriate occurrences, --signal-- should be inserted between “electromagnetic” and “frequency”. Page 8, paragraph 0015 and page 14, paragraph 0028, note that “through 28, 30” and “28, 30 through” should be respectively rephrased as --28, 30 to pass through filter 12-- for a proper characterization. Page 8, paragraphs 0015 and 0016, note that updated status information for the cited related serial numbers should be provided, where available. Page 12, 13 paragraph 0024, note that use of the term “item” should be rephrased for clarity. Page 12, paragraph 0024, note that it is unclear whether “in region C, no electromagnetic wave absorption is register” is a proper characterization, especially in view of Fig. 1 which depicts wave (30), corresponding to region C, passing through the plasma to be received by antenna (14). Clarification is needed. Note that in the fig. 4 description, reference labels (20, 34, 36, 38, 40) need to be explicitly described relative to Fig. 4.

Appropriate correction is required.

The drawings are objected to because of the following: In fig. 4, reference label --12-- needs to be provided as per the Fig. 4 description; In Fig. 5, reference labels --82-- and --84-- need to be provided as per the Fig. 5 description. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 2817

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification fails to characterize what constitutes "combinations thereof" to the degree necessary such that one skilled in the art would not be able to form such "combination" without undue experimentation.

The following claims have been found objectionable for reasons set forth below:

In claims 1, 14, 15, 16, 17, 33-39, at all appropriate occurrences therein, note that --signal-- should be inserted between "electromagnetic" and "frequency" for a proper characterization.

In claim 33, line 4, note that --signal-- should be inserted between "electromagnetic" and "frequencies" for clarity.

In claims 36, 37, note that "frequency" should correctly be --frequencies-- as to be consistent with the recited "range".

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7-13; 14-21, 23-26, 28, 29; 33-40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by either Kaufman et al reference (i.e. '531 or '034).

Art Unit: 2817


Note that either Kaufman et al reference discloses an electromagnetic wave filter comprising a "power medium" defined by an elongated dielectric walled tube or chamber (i.e. 10 in '531; 22 in '034) having a gas composition (e.g. mercury vapor) therein. An energy source including electrodes and a voltage source (i.e. col. 5, ls. 11-16 in '531; (26, 24, 28) in '034) to ionize the gas composition into a plasma column within the tube. Moreover, the plasma density can be varied by a control mechanism or regulator (i.e. col. 6, ls. 7-12 in '034; col. 7, ls 18-22 in '531) to adjust discharge energy (i.e. current) in the plasma and hence the operating range of the filter. As described in conjunction with Figs. 2 and 3 of either reference, the plasma tube is operative as a plasma antenna for receiving a continuous electromagnetic wave (48 in '034; 28 in '531) impinging on the plasma antenna from a remote source (i.e. 12 in '034; 44 in '531). As is evident from the frequency response curve in Fig. 3 of either reference, certain undesired frequencies (arbitrarily designated as either first or second frequencies) impinging on the plasma column will not be absorbed by the plasma column and will be reflected therefrom (i.e. out of band frequencies filtered out) while certain other desired frequencies (i.e. arbitrarily designated as either second or first frequencies) will be absorbed or passed by the plasma column (i.e. in band signals) and coupled to a probe (22 in '531; 42 in '034).

Claims 30-32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kaufman et al ('531).

Art Unit: 2817

As is evident from figs. 9, 10 of Kaufman ('531), note that a plurality of plasma tubes (110a, 110b, 110c, etc) are arranged to function as a plural plasma antenna array. Each plasma tube operates in the same manner as the embodiment with a single plasma tube.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 308-4902.

  
BENNY T. LEE  
PRIMARY EXAMINER  
ART UNIT 2817

Lee/ek

06/19/03